Manage Data. Harvest Information.

How can information technology play a role in primary industries climate resilience?

CHALLENGES FOR WORLD AGRICULTURE

- 9 Billion people on earth by 2040
- Up to 40% of food wasted and never eaten
- Diversity of production systems and inefficiencies of supply chains
- Limited interoperability of technologies-
- Poor adoption of available technologies
- **Climate Change – Brings some Preparedness**

OUR REALITY

We already have enough technology to manage our agricultural systems.

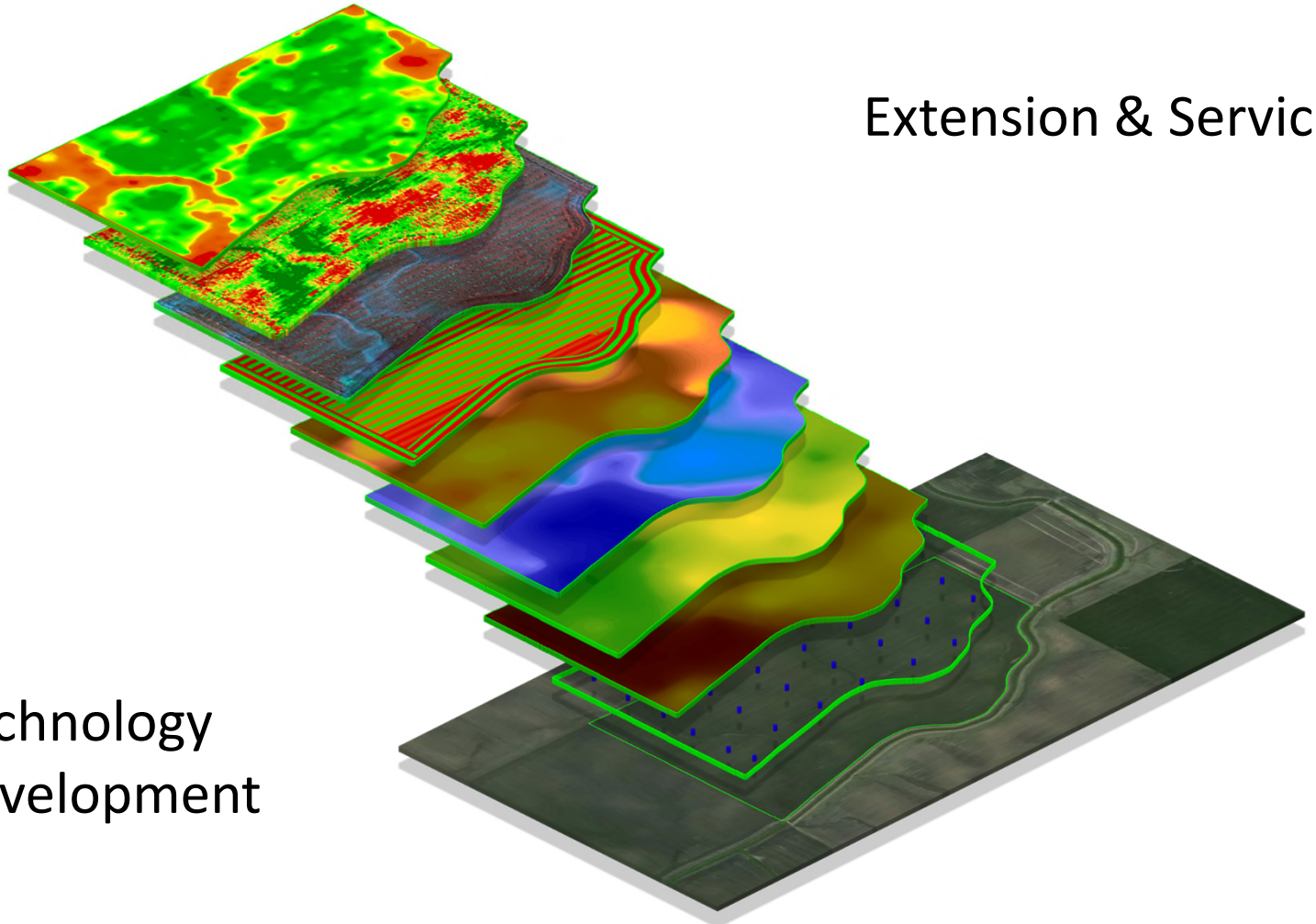
We are just not using what we have to its advantage!

AGRICULTURAL COMPLEXITY

Extension & Services

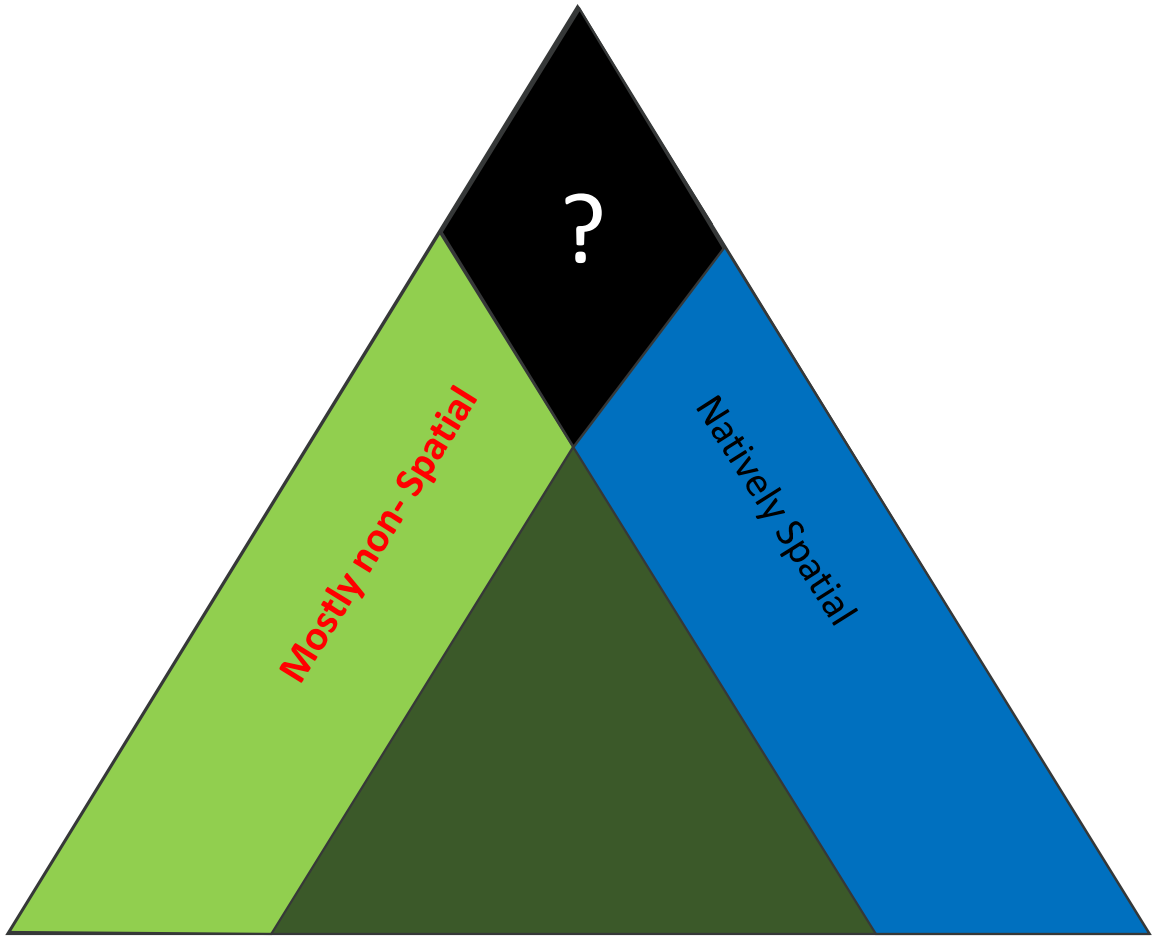
On farm
Practice

R&D



Technology
development

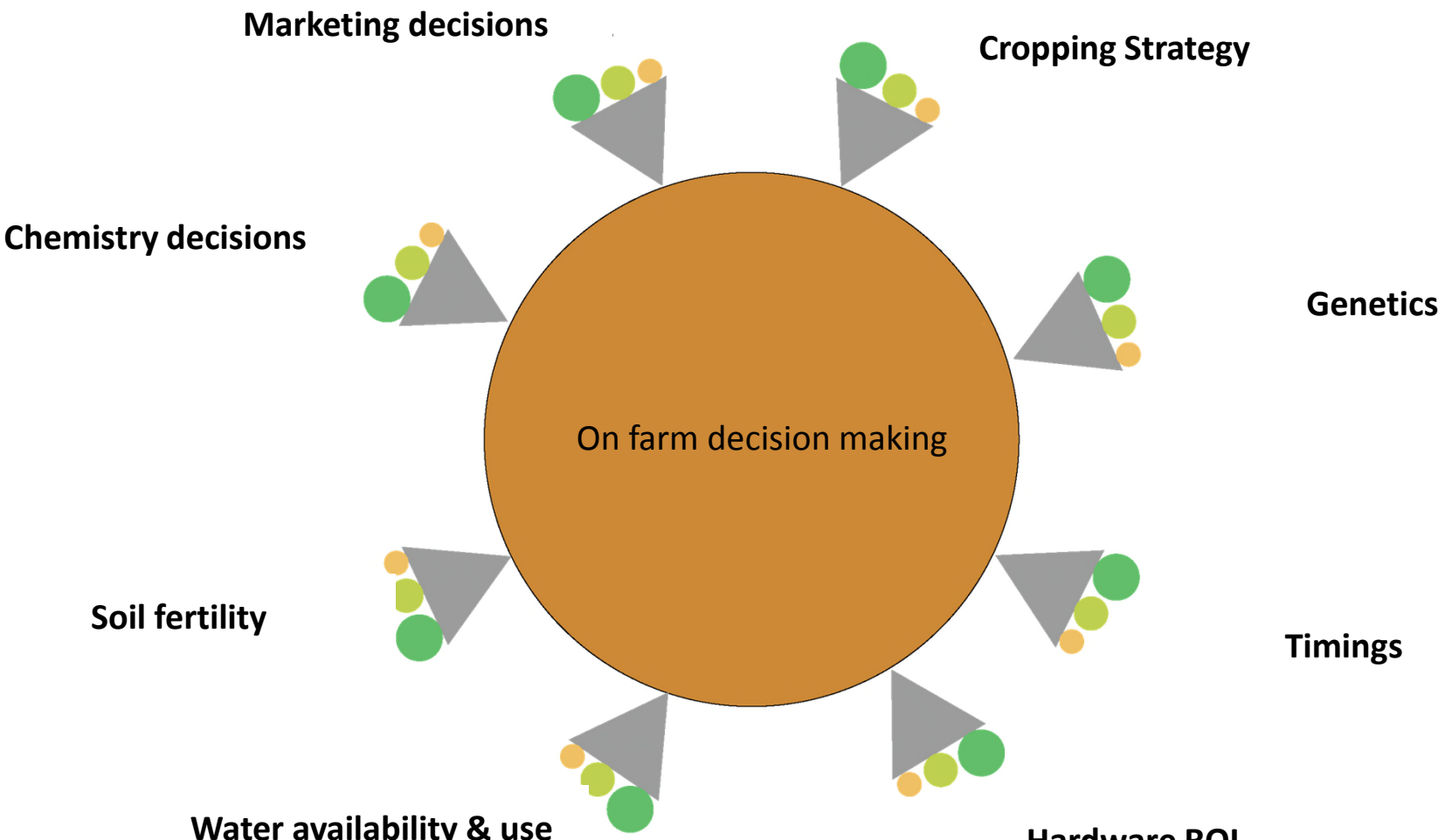
PRODUCTION & ENVIRONMENTAL OUTCOMES



Management Decisions

Bio-physical conditions (Precision Agriculture)

FARM DECISION MAKING COMPLEXITY



TODAY

Agronomic data

Farmer

Crop Consultant

Ag Retailer

Farm spatial data will soon be utilized in other areas of the ag sector.

TOMORROW

Crop Insurance

Ag Lending

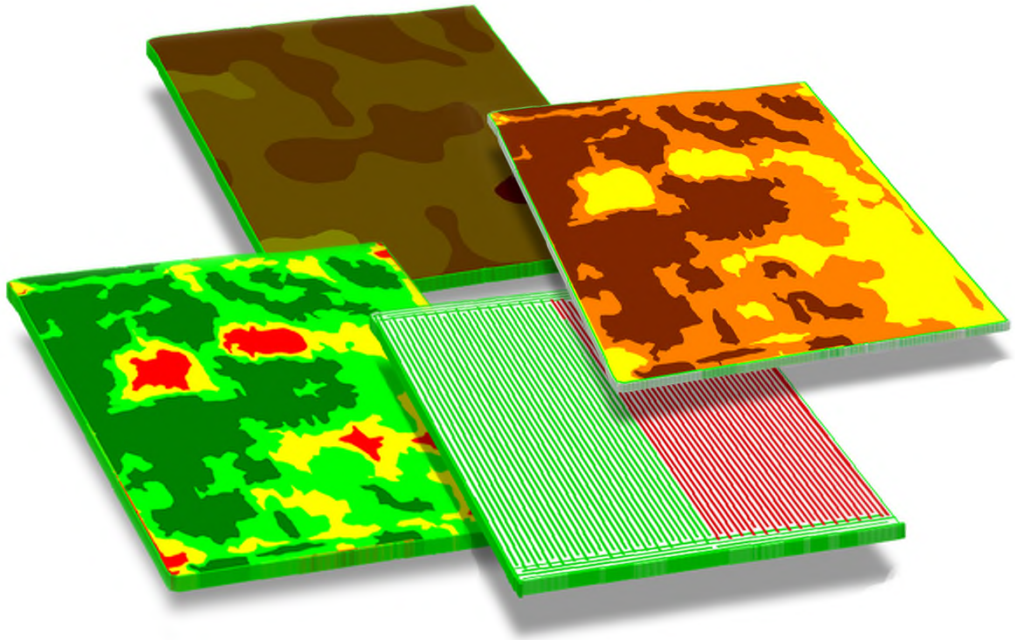
Sustainability

Traceability

Forecasting & Marketing

OUR PREMISE

One day, all B2B activity throughout the entire ag vertical will be influenced by the spatial data of a farm field.



Farmer engagement

Today

Collect data about farm operations

Communicate with a tractor for precision agriculture

Soon

Order a crop image from their iPad

Run a decision support analysis on their own data using a service providers toolset

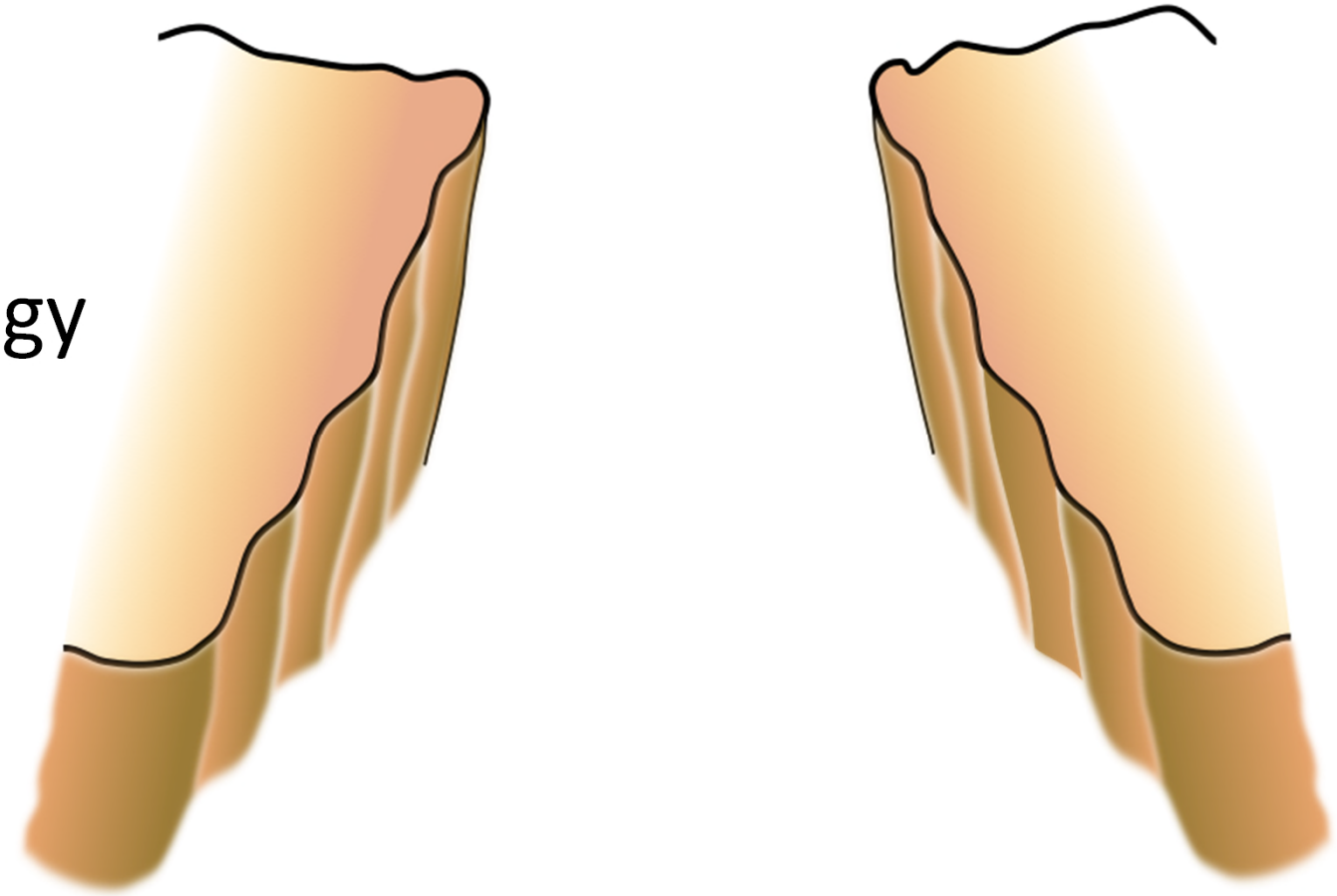
Connect with the supply chain partners to engage and share information critical to demand planning and just in time supply

Comply with a risk management assessment to better access capital or comply with a QA system

REAL TIME DATA PROCESSING AND DECISION SUPPORT

1) SERVICES & EXTENSION ARE CRITICAL

Technology

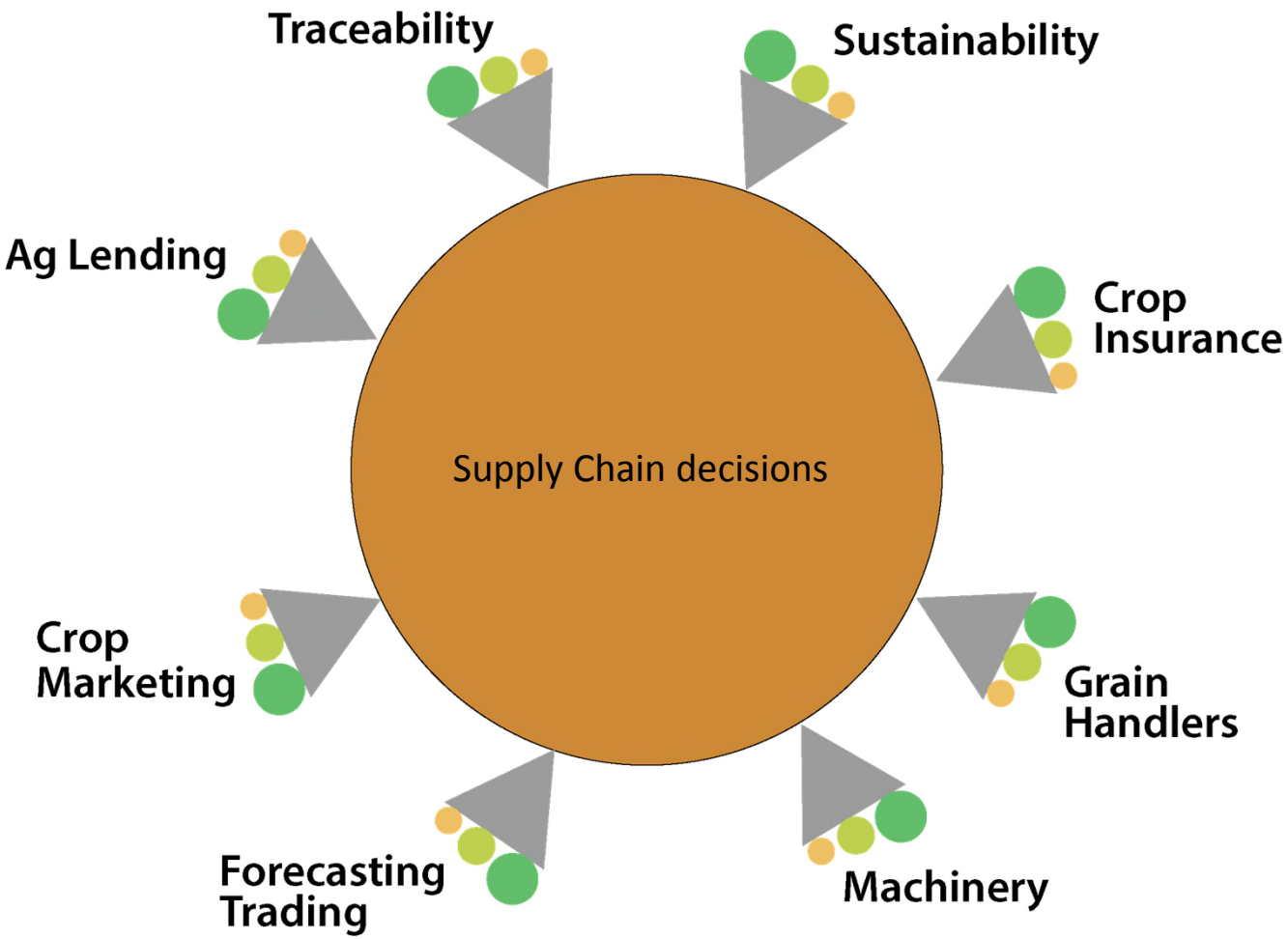


Farmer

2) NO SINGLE SOFTWARE WILL GET IT DONE!

Agriculture is too complex for any single software platform to ever be the best at all of the elements needed for Agriculture.

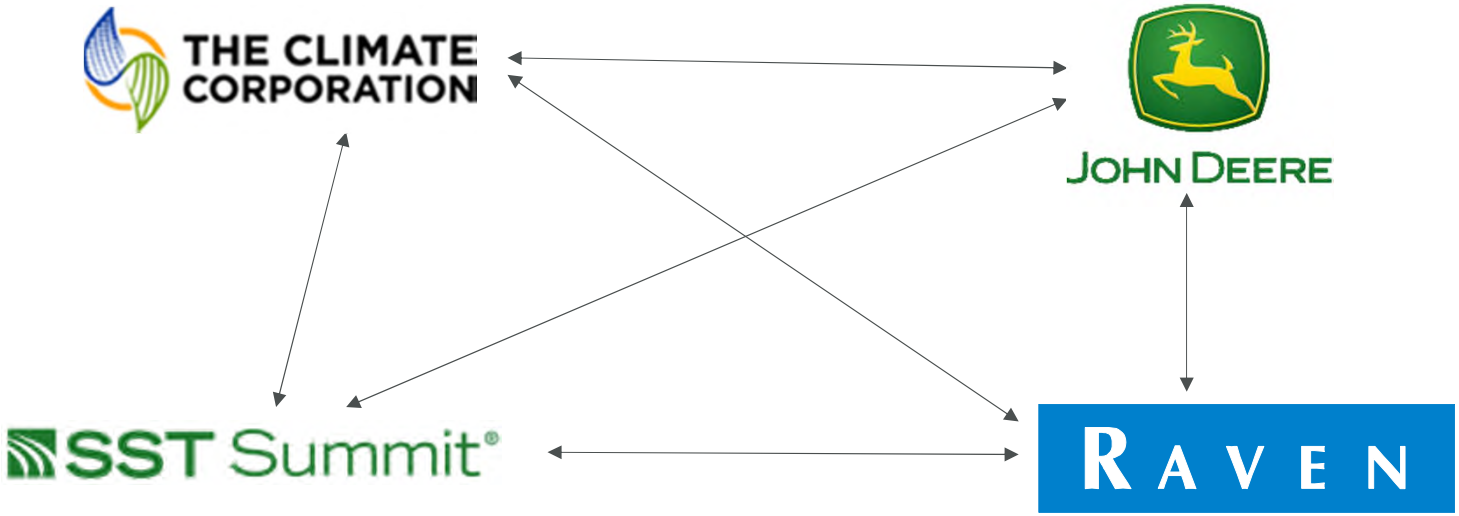
INTEGRATING THE ENTIRE B2B AG VALUE CHAIN



SPATIAL STANDARDIZATION IS ESSENTIAL FOR INTEROPERABILITY

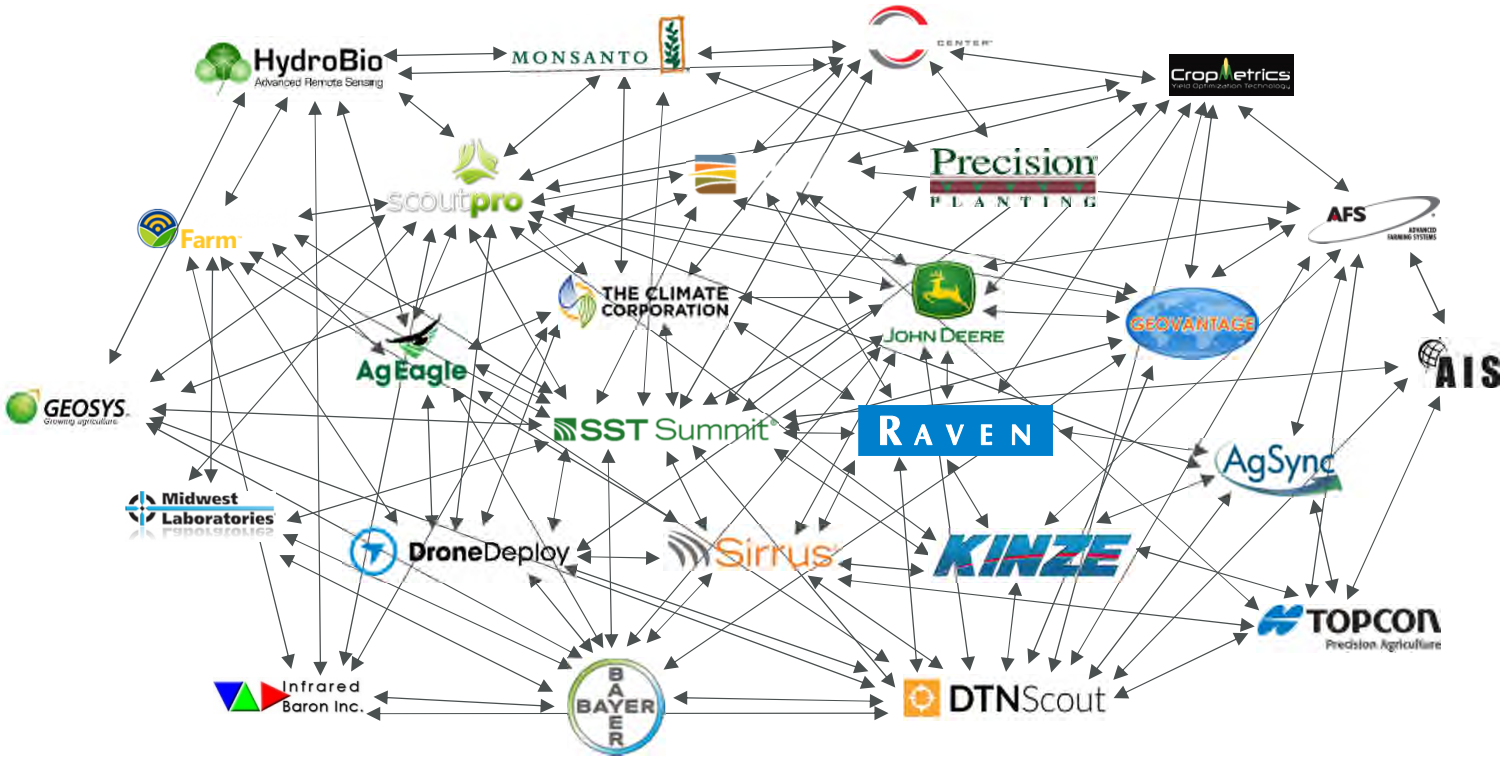
All precision ag data must be standardized and centralized in order to achieve interoperability, commercial services delivery and value.

Import – unpack - Translate



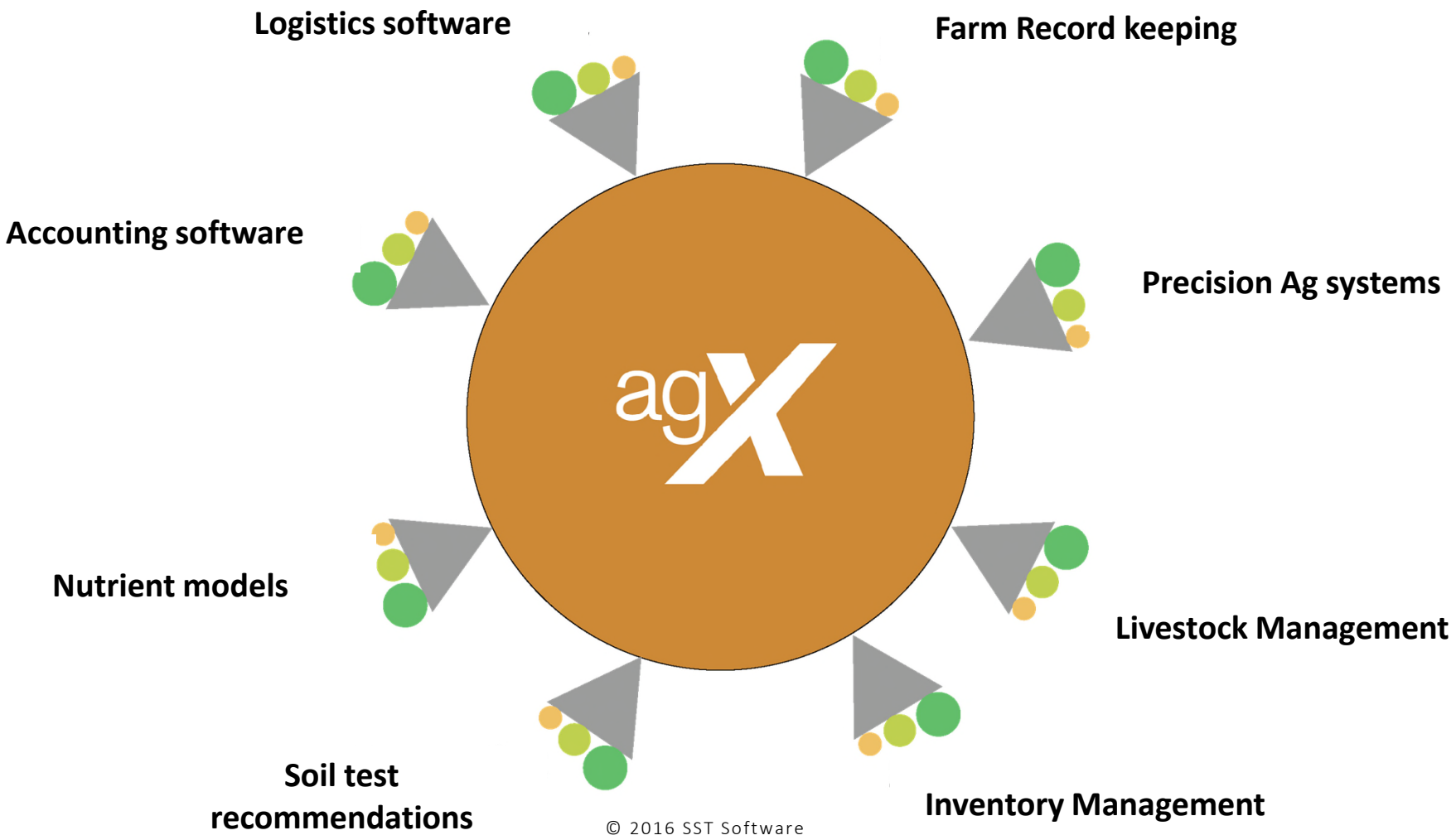
DIRECT ONE-TO-ONE API Integration

DIRECT ONE-TO-ONE API CONNECTIONS

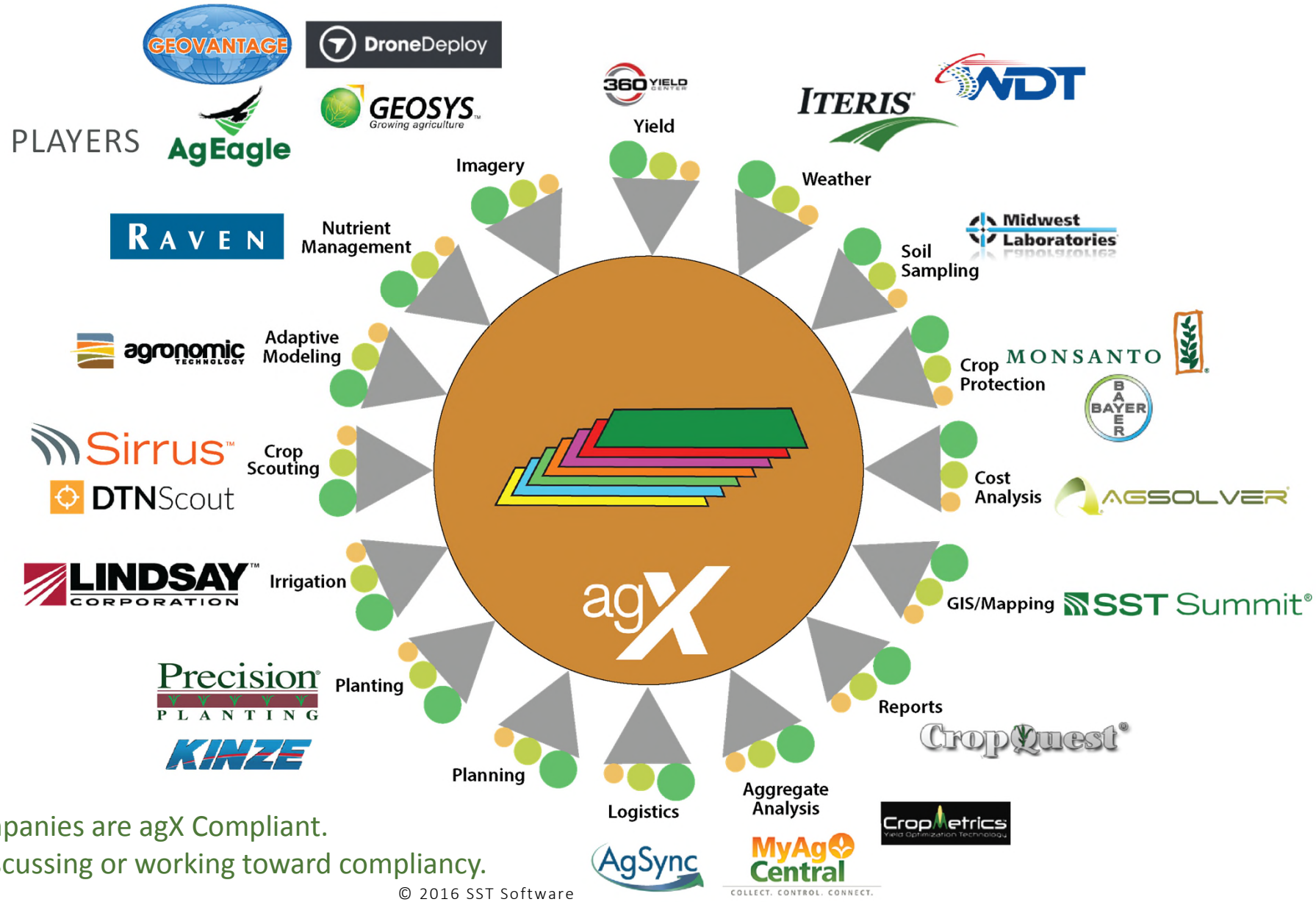


DIRECT ONE-TO-ONE API Integration

MULTI VENDOR SOLUTIONS FOR FARM COMPLEXITY



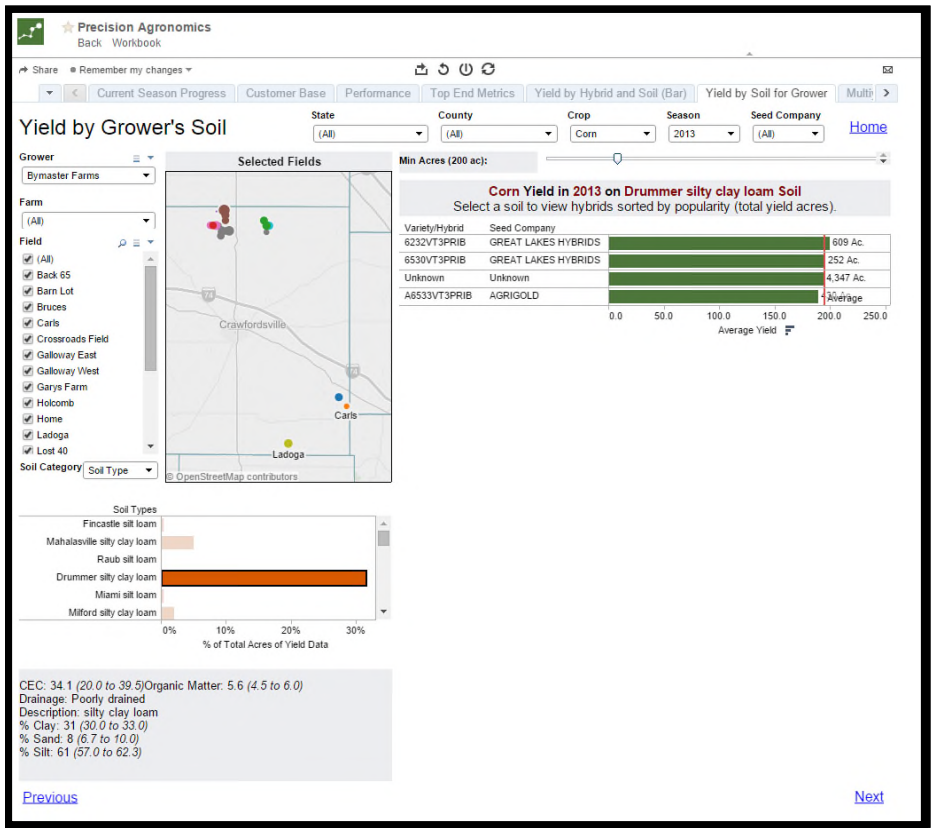
agX API
VALUE ADDED PLAYERS



Not all featured companies are agX Compliant.
Most are actively discussing or working toward compliancy.

Analytics

Big Data



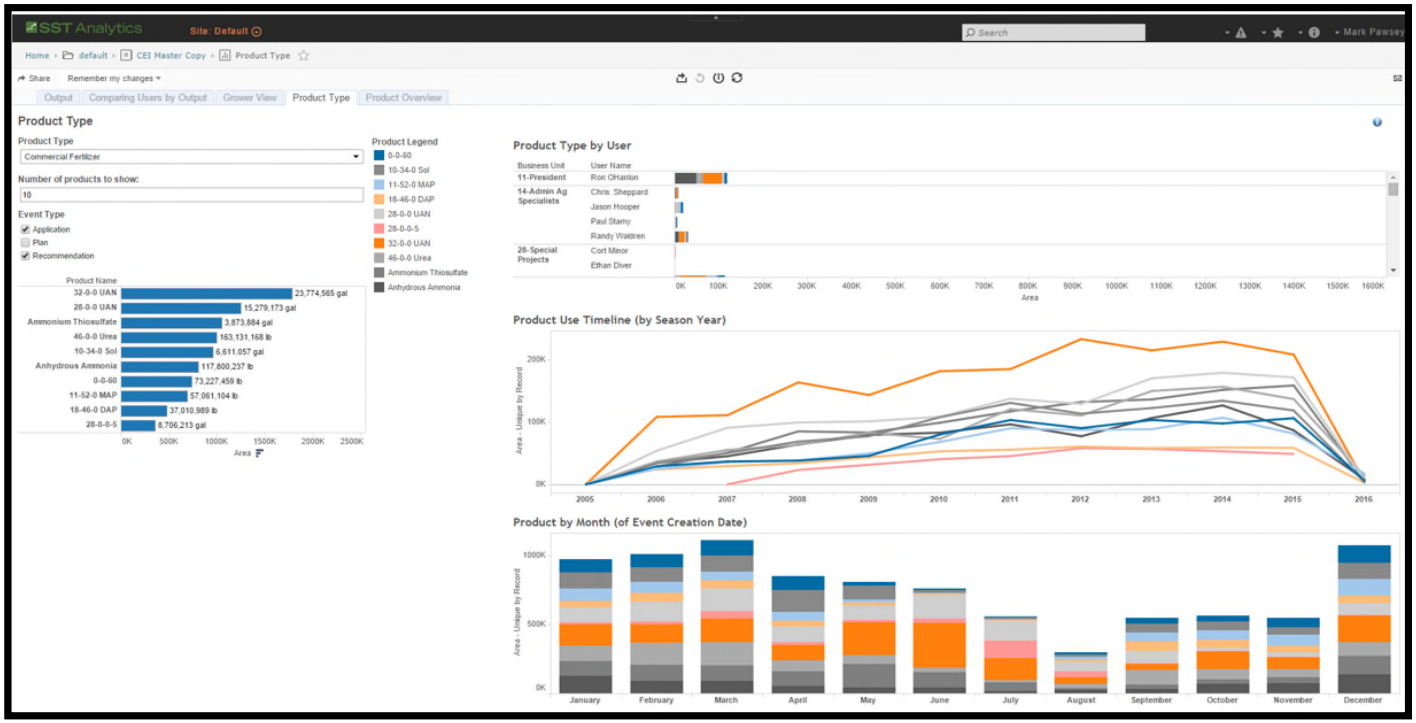
Analysis of yield by management and environment through the aggregate

Define a single farm and compare it to the aggregate for specific criteria

SST Software
Manage Data. Harvest Information.

Analytics

Big Data



Analysis of product demand and usage

SST Software
Manage Data. Harvest Information.


agX
THE LANGUAGE OF AGRICULTURE

The language of agriculture.

Marketplace for apps and services

API's to integrate to other systems

Security embedded in structure

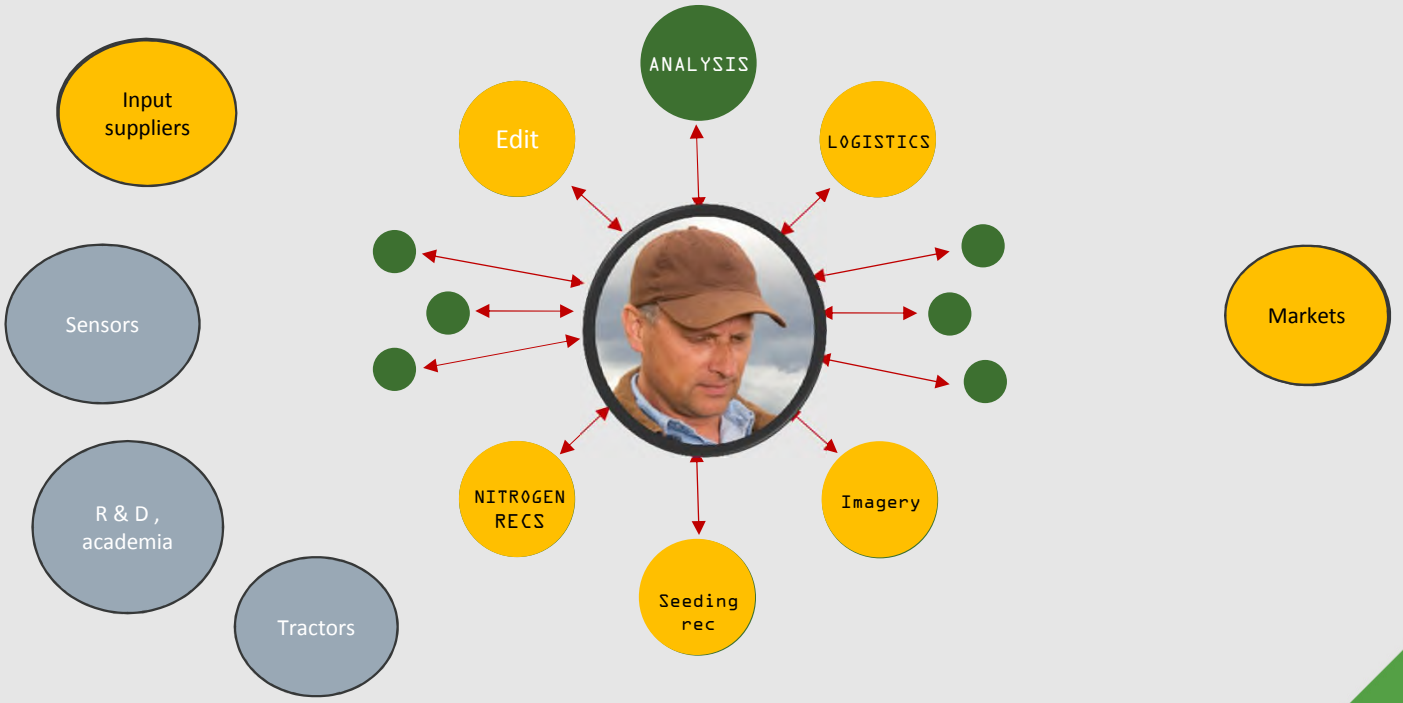
Secure Cloud Storage

Language/ descriptors

Database structure

agX Structures

Synchronization with a Central Hub



APPROACH

THREE

The cloud vault works with software and hardware from many different vendors

SST Software

Manage Data. Harvest Information.

STANDARDIZATION KEY AREAS

1

NAMING CONVENTIONS

Schemas & Nomenclature

2

SPATIAL STRUCTURE

Spatial Integrity

3

FIELD HIERARCHY

Grower – Farm - Field

4

DATA ADMINISTRATION

Permission-based Settings

STANDARDIZATION ISSUE:

NAMING CONVENTIONS

NAMING CONVENTIONS

Management activity

Pre Emergent ?

PreEmergent ?

Pre-Emergent ?

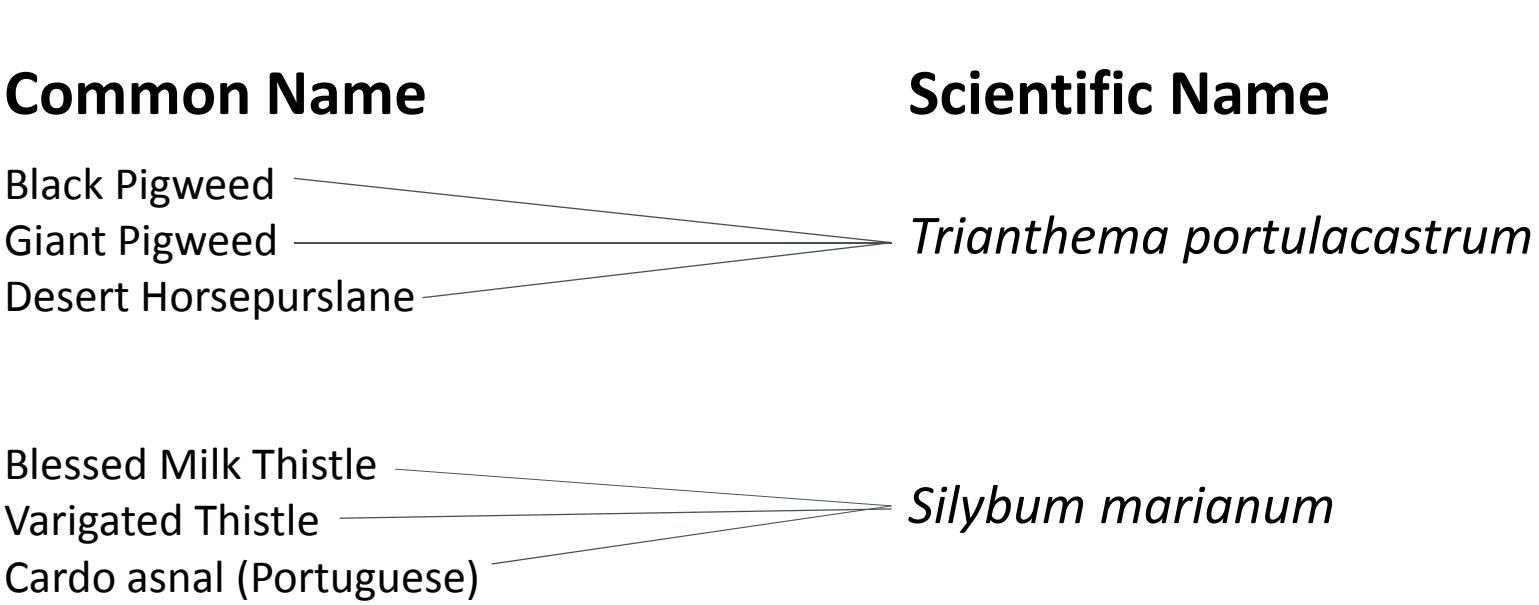
Categories that Define Farming Operations

Active Ingredients | Additives | Additive Description | Application Equipment Class | Application Equipment | Application Method
Application Timing | Applicator Type | Bale Type | Beneficials | Beneficials Stage | Buffer Type | Carrier Types | Chemical Families
Companies | Crops | Crop Damage | Crop Injury Severity | Crop Population Time | Crop Purpose | Direction | Diseases
Disease Density | Disease Stage | Fertilizers | Formulation Types | Fungicides | General Weather | Ground Cover
Growth Stage Groups | Growth Stages | Growth Regulators | Harvesters | Harvester Class | Herbicides | Insects | Insect Density
Insect Location | Insect Stage | Insecticides | Irrigation | Manure Animal Type | Manure Application Method | Manure Storage
Mode of Action Groups | Mode of Action Agencies | Moisture | Nematode | Nitrogen Stabilizers | Nutrients | Nutrient Deficiency
Nutrient Symptom | Planting Class | Planting Equipment | Pesticide Injury Symptom | Phosphorus Extraction Method
Seed Treatments | Sensitive Area | Signal Words | Site of Actions | Soil Texture | Symptom Severity | Tillage Implements
Tillage Style | Tile Line Description | Tile Line Function | Tile Line Material | Tile Pt Function | Tile Pt Type | Time Interval
Tractors | Varieties | Variety Traits | Weeds | Weed Density | Weed Stage

80+ Structured Categories

140,000+ Entries of Reference Data

Localization & Internationalization



STANDARDIZED HIERARCHY

ALL DATA WITHIN SST'S SYSTEM IS TIED TO THE G/F/F HIERARCHY SO THAT DATA KNOWS WHERE IT BELONGS.

01

GROWER

Who farms the land?

02

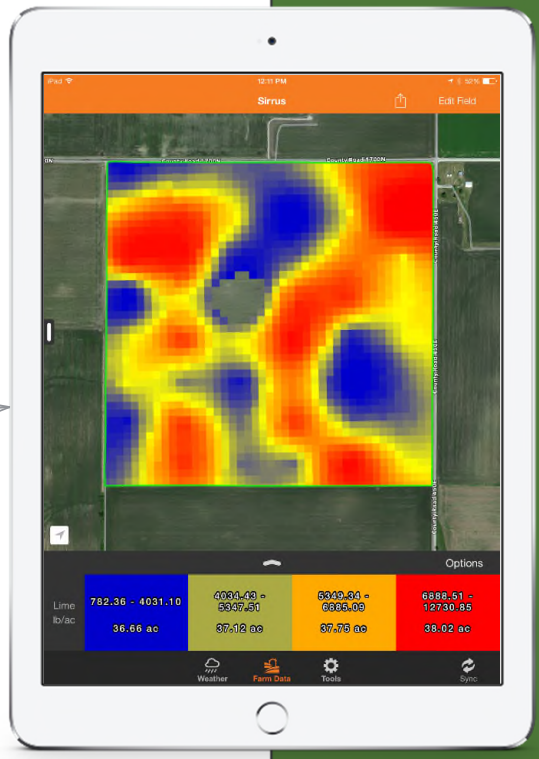
FARM

How are the fields grouped together and managed as farms?

03

FIELD

What is the individual field and data layers associated to it?



STANDARDIZED SECURITY

ALL DATA WITHIN SST'S SYSTEM IS TIED TO USER-BASED PERMISSION SETTINGS TO PROTECT DATA FROM UNAUTHORIZED USE.

01 ADMINISTRATOR

02 EDITING RIGHTS

03 VIEW ONLY

04 NO ACCESS

THANK YOU